

SEQUENCE LISTING



<10> ROSENTHAL, Arnon
LEVKOWITZ, Gil
<20> METHODS OF TREATING ALZHEIMER'S DISEASE
USING ANTIBODIES DIRECTED AGAINST AMYLOID BETA PEPTIDE AND
COMPOSITIONS THEREOF

<130> 514712001500

<140> US 10/683,815

<141> 2003-10-09

<150> US 60/417,232

<151> 2002-10-09

<150> US 60/447,611

<151> 2003-02-13

<150> US 60/464,754

<151> 2003-04-22

<150> US 60/480,353

<151> 2003-06-20

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

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<212> PRT

<213> Homo Sapiens

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<212> PRT

<213> Homo Sapiens

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			20					25					30		

Gln	Ile	Ala	Met	Phe	Cys	Gly	Arg	Leu	Asn	Met	His	Met	Asn	Val	Gln
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Asn	Gly	Lys	Trp	Asp	Ser	Asp	Pro	Ser	Gly	Thr	Lys	Thr	Cys	Ile	Asp
	50					55					60				
Thr	Lys	Glu	Gly	Ile	Leu	Gln	Tyr	Cys	Gln	Glu	Val	Tyr	Pro	Glu	Leu
65					70					75					80
Gln	Ile	Thr	Asn	Val	Glu	Ala	Asn	Gln	Pro	Val	Thr	Ile	Gln	Asn	
			85					90					95		
Trp	Cys	Lys	Arg	Gly	Arg	Lys	Gln	Cys	Lys	Thr	His	Pro	His	Phe	Val
			100					105					110		
Ile	Pro	Tyr	Arg	Cys	Leu	Val	Gly	Glu	Phe	Val	Ser	Asp	Ala	Leu	Leu
		115					120					125			
Val	Pro	Asp	Lys	Cys	Lys	Phe	Leu	His	Gln	Glu	Arg	Met	Asp	Val	Cys
	130					135					140				
Glu	Thr	His	Leu	His	Trp	His	Thr	Val	Ala	Lys	Glu	Thr	Cys	Ser	Glu
145					150					155					160
Lys	Ser	Thr	Asn	Leu	His	Asp	Tyr	Gly	Met	Leu	Leu	Pro	Cys	Gly	Ile
			165						170					175	
Asp	Lys	Phe	Arg	Gly	Val	Glu	Phe	Val	Cys	Cys	Pro	Leu	Ala	Glu	Glu
			180					185					190		
Ser	Asp	Asn	Val	Asp	Ser	Ala	Asp	Ala	Glu	Glu	Asp	Asp	Ser	Asp	Val
		195					200					205			
Trp	Trp	Gly	Gly	Ala	Asp	Thr	Asp	Tyr	Ala	Asp	Gly	Ser	Glu	Asp	Lys
	210					215					220				
Val	Val	Glu	Val	Ala	Glu	Glu	Glu	Glu	Val	Ala	Glu	Val	Glu	Glu	Glu
225					230					235					240
Glu	Ala	Asp	Asp	Asp	Glu	Asp	Asp	Glu	Asp	Gly	Asp	Glu	Val	Glu	Glu
				245					250					255	
Glu	Ala	Glu	Glu	Pro	Tyr	Glu	Glu	Ala	Thr	Glu	Arg	Thr	Thr	Ser	Ala
			260					265					270		
Thr	Thr	Thr	Thr	Thr	Thr	Thr	Glu	Ser	Val	Glu	Glu	Val	Val	Arg	Glu
		275					280					285			
Val	Cys	Ser	Glu	Gln	Ala	Glu	Thr	Gly	Pro	Cys	Arg	Ala	Met	Ile	Ser
	290					295					300				
Arg	Trp	Tyr	Phe	Asp	Val	Thr	Glu	Gly	Lys	Cys	Ala	Pro	Phe	Phe	Tyr
305				310						315					320
Gly	Gly	Cys	Gly	Gly	Asn	Arg	Asn	Asn	Phe	Asp	Thr	Glu	Glu	Tyr	Cys
				325					330					335	
Met	Ala	Val	Cys	Gly	Ser	Ala	Met	Ser	Gln	Ser	Leu	Leu	Lys	Thr	Thr
			340					345					350		
Gln	Glu	Pro	Leu	Ala	Arg	Asp	Pro	Val	Lys	Leu	Pro	Thr	Thr	Ala	Ala
		355				360						365			
Ser	Thr	Pro	Asp	Ala	Val	Asp	Lys	Tyr	Leu	Glu	Thr	Pro	Gly	Asp	Glu
	370					375					380				
Asn	Glu	His	Ala	His	Phe	Gln	Lys	Ala	Lys	Glu	Arg	Leu	Glu	Ala	Lys
385					390					395					400
His	Arg	Glu	Arg	Met	Ser	Gln	Val	Met	Arg	Glu	Trp	Glu	Glu	Ala	Glu
				405					410					415	
Arg	Gln	Ala	Lys	Asn	Leu	Pro	Lys	Ala	Asp	Lys	Lys	Ala	Val	Ile	Gln
			420					425					430		
His	Phe	Gln	Glu	Lys	Val	Glu	Ser	Leu	Glu	Gln	Glu	Ala	Ala	Asn	Glu
		435					440					445			
Arg	Gln	Gln	Leu	Val	Glu	Thr	His	Met	Ala	Arg	Val	Glu	Ala	Met	Leu
	450					455					460				
Asn	Asp	Arg	Arg	Arg	Leu	Ala	Leu	Glu	Asn	Tyr	Ile	Thr	Ala	Leu	Gln
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 <213> Mus Musculus

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 Trp Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Gly Glu Ile Asn Pro Asp Ser Ser Thr Ile Asn Tyr Thr Pro Ser Leu
 50 55 60
 Lys Asp Lys Phe Ile Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Ser Lys Val Arg Ser Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Arg Gln Met Gly Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
 100 105 110
 Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser
 115 120 125
 Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu Val Lys Gly
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly Ser Leu Ser
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp Leu Tyr Thr
 165 170 175
 Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro Ser Glu Thr
 180 185 190
 Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys Val Asp Lys
 195 200 205
 Lys Ile Val Pro Arg Asp Cys
 210 215

<210> 5
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 <212> DNA
 <213> Mus Musculus

<400> 5
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 gatggaactg ttaaactcct gatctattac acatcaagtt tacactcagg agtcccatca 180
 aggttcagtg gcagtggttc tgggacagat tattctctca ccatcagcaa cctggaacct 240
 gaagatattg ccacttacta ttgtcagcag tataggaagc ttccgtacac gttcggaggg 300
 gggaccaagc tggaataaaa acgggctgat gctgcaccaa ctgtatccat cttcccacca 360
 tccagtgagc agttaacatc tggaggtgcc tcagtcgtgt gcttcttgaa caacttctac 420
 cccaaagaca tcaatgtcaa gtggaagatt gatggcagtg aacgacaaaa tggcgtcctg 480
 aacagttgga ctgatcagga cagcaaagac agcacctaca gcatgagcag caccctcacg 540
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 tcaacttcac ccattgtcaa gagcttcaac aggaatgagt gt 642

<210> 6

<211> 214
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 <213> Mus Musculus

<400> 6

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		20						25					30		
Leu	Asn	Trp	Phe	Gln	Gln	Lys	Pro	Asp	Gly	Thr	Val	Lys	Leu	Leu	Ile
		35					40					45			
Tyr	Tyr	Thr	Ser	Ser	Leu	His	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Ser	Leu	Thr	Ile	Ser	Asn	Leu	Glu	Pro
65					70					75				80	
Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr	Arg	Lys	Leu	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Ala	Asp	Ala	Ala
			100					105					110		
Pro	Thr	Val	Ser	Ile	Phe	Pro	Pro	Ser	Ser	Glu	Gln	Leu	Thr	Ser	Gly
		115					120					125			
Gly	Ala	Ser	Val	Val	Cys	Phe	Leu	Asn	Asn	Phe	Tyr	Pro	Lys	Asp	Ile
	130					135					140				
Asn	Val	Lys	Trp	Lys	Ile	Asp	Gly	Ser	Glu	Arg	Gln	Asn	Gly	Val	Leu
145					150					155					160
Asn	Ser	Trp	Thr	Asp	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Met	Ser
				165					170					175	
Ser	Thr	Leu	Thr	Leu	Thr	Lys	Asp	Glu	Tyr	Glu	Arg	His	Asn	Ser	Tyr
		180						185					190		
Thr	Cys	Glu	Ala	Thr	His	Lys	Thr	Ser	Thr	Ser	Pro	Ile	Val	Lys	Ser
		195					200					205			
Phe	Asn	Arg	Asn	Glu	Cys										
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<210> 7
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 <212> DNA
 <213> Mus Musculus

<400> 7

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tcttcaggga	agggtctgga	gtggctggca	cacatttggg	gggatgatga	taagtactat	180
aaccatccc	tgaagagcca	gtcacaatc	tccaaggata	cctccagaaa	ccaggtattc	240
ctcaagatca	ccagtgtgga	cactgcagat	actgccactt	actactgtgc	tcgaaggggg	300
gtacgacata	gagactactt	tgactactgg	ggccaaggca	ccactctcac	agtctcctca	360
gccaaaacaa	caccccatc	agtctatcca	ctggcccctg	ggtgtggaga	tacaactggg	420
tcctccgtga	ctctgggatg	cctgggtcaag	ggctacttcc	ctgagtcagt	gactgtgact	480
tggaactctg	gatccctgtc	cagcagtgtg	cacaccttcc	cagctctcct	gcagtctgga	540
ctctacacta	tgagcagctc	agtgactgtc	ccctccagca	cctggccaag	tcagaccgtc	600
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gggccattt	caacaatcaa	cccc				684

<210> 8
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 <212> PRT

<213> Mus Musculus

<400> 8

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Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Ser Thr Ser Gly
 20          25          30
Met Gly Val Gly Trp Ile Arg Gln Ser Ser Gly Lys Gly Leu Glu Trp
 35          40          45
Leu Ala His Ile Trp Trp Asp Asp Lys Tyr Tyr Asn Pro Ser Leu
 50          55          60
Lys Ser Gln Leu Thr Ile Ser Lys Asp Thr Ser Arg Asn Gln Val Phe
 65          70          75          80
Leu Lys Ile Thr Ser Val Asp Thr Ala Asp Thr Ala Thr Tyr Tyr Cys
 85          90          95
Ala Arg Arg Gly Val Arg His Arg Asp Tyr Phe Asp Tyr Trp Gly Gln
100          105          110
Gly Thr Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val
115          120          125
Tyr Pro Leu Ala Pro Gly Cys Gly Asp Thr Thr Gly Ser Ser Val Thr
130          135          140
Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Ser Val Thr Val Thr
145          150          155          160
Trp Asn Ser Gly Ser Leu Ser Ser Ser Val His Thr Phe Pro Ala Leu
165          170          175
Leu Gln Ser Gly Leu Tyr Thr Met Ser Ser Ser Val Thr Val Pro Ser
180          185          190
Ser Thr Trp Pro Ser Gln Thr Val Thr Cys Ser Val Ala His Pro Ala
195          200          205
Ser Ser Thr Thr Val Asp Lys Lys Leu Glu Pro Ser Gly Pro Ile Ser
210          215          220
Thr Ile Asn Pro
225
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<210> 9

<211> 657

<212> DNA

<213> Mus Musculus

<400> 9

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tacctgcaga aaccaggcca gtctccaaaa ctcttatctt acaaagtttc caaccgattt 180
tctggggtcc cagacaggtt cagtggcagt ggatcaggga cagatttcac actcaagatc 240
agcagagtgg aggctgagga tctgggagtt tattactgct ttcaagggtc acgtgttcct 300
ctcacgttcg gtgctgggac caagctggag ctgaaacggg ctgatgctgc accaactgta 360
tccatcttcc caccatccag tgagcagtta acatctggag gtgcctcagt cgtgtgcttc 420
ttgaacaact tctaccccaa agacatcaat gtcaagtggg agattgatgg cagtgaacga 480
caaaatggcg tcctgaacag ttggactgat caggacagca aagacagcac ctacagcatg 540
agcagcacc ctcagttgac caaggacgag tatgaacgac ataacagcta tacctgtgag 600
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<211> 219

<212> PRT

<213> Mus Musculus

<400> 10

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Asp	Gln	Ala	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Gln	Ser	Ile	Val	His	Ser
		20						25				30			
Asn	Gly	Asn	Thr	Tyr	Leu	Glu	Trp	Tyr	Leu	Gln	Lys	Pro	Gly	Gln	Ser
	35						40					45			
Pro	Lys	Leu	Leu	Ile	Tyr	Lys	Val	Ser	Asn	Arg	Phe	Ser	Gly	Val	Pro
	50					55					60				
Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65				70					75					80	
Ser	Arg	Val	Glu	Ala	Glu	Asp	Leu	Gly	Val	Tyr	Tyr	Cys	Phe	Gln	Gly
			85					90						95	
Ser	Arg	Val	Pro	Leu	Thr	Phe	Gly	Ala	Gly	Thr	Lys	Leu	Glu	Leu	Lys
		100						105					110		
Arg	Ala	Asp	Ala	Ala	Pro	Thr	Val	Ser	Ile	Phe	Pro	Pro	Ser	Ser	Glu
	115						120					125			
Gln	Leu	Thr	Ser	Gly	Gly	Ala	Ser	Val	Val	Cys	Phe	Leu	Asn	Asn	Phe
	130					135					140				
Tyr	Pro	Lys	Asp	Ile	Asn	Val	Lys	Trp	Lys	Ile	Asp	Gly	Ser	Glu	Arg
145				150					155					160	
Gln	Asn	Gly	Val	Leu	Asn	Ser	Trp	Thr	Asp	Gln	Asp	Ser	Lys	Asp	Ser
			165					170					175		
Thr	Tyr	Ser	Met	Ser	Ser	Thr	Leu	Thr	Leu	Thr	Lys	Asp	Glu	Tyr	Glu
		180					185						190		
Arg	His	Asn	Ser	Tyr	Thr	Cys	Glu	Ala	Thr	His	Lys	Thr	Ser	Thr	Ser
	195						200					205			
Pro	Ile	Val	Lys	Ser	Phe	Asn	Arg	Asn	Glu	Cys					
	210					215									

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<212> PRT

<213> Homo Sapiens

<400> 11

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Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys	Gly	Ala	Ile	Ile
		20						25				30			
Gly	Leu	Met	Val	Gly	Gly	Val	Val	Ile	Ala						
		35					40								

<210> 12

<211> 43

<212> PRT

<213> Homo Sapiens

<400> 12

Asp	Ala	Glu	Phe	Arg	His	Asp	Ser	Gly	Tyr	Glu	Val	His	His	Gln	Lys
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Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys	Gly	Ala	Ile	Ile
		20						25				30			
Gly	Leu	Met	Val	Gly	Gly	Val	Val	Ile	Ala	Thr					

35

40

<210> 13
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 <213> Homo Sapiens

<400> 13
 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
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 Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 20 25 30
 Gly Leu Met Val Gly Gly Val Val Ile
 35 40

<210> 14
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 14
 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
 1 5 10 15
 Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 20 25 30
 Gly Leu Met Ala Gly Gly Val Val
 35 40

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<400> 15
 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
 1 5 10 15
 Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 20 25 30
 Gly Leu Met Val Ala Gly Val Val
 35 40

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<223> Synthetic Construct

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Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys	Gly	Ala	Ile	Ile
		20						25					30		
Gly	Leu	Met	Val	Gly	Ala	Val	Val								
		35					40								

<210> 17

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<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 17

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1				5				10						15	
Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys	Gly	Ala	Ile	Ile
		20						25					30		
Gly	Leu	Met	Val	Gly	Gly	Val	Ala								
		35					40								

<210> 18

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<212> PRT

<213> Artificial Sequence

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<223> Synthetic Construct

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Asp	Ala	Glu	Phe	Arg	His	Asp	Ser	Gly	Tyr	Glu	Val	His	His	Gln	Lys
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Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys	Gly	Ala	Ile	Ile
		20						25					30		
Gly	Leu	Met	Val	Gly	Gly	Val	Ala								
		35					40								

<210> 19

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 19

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1				5				10						15	

Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	Gln	Gly	Ile	Ser	Asn	Tyr	
			20					25					30			
Leu	Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	
		35					40					45				
Tyr	Tyr	Thr	Ser	Ser	Leu	His	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	
	50					55					60					
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	
65					70					75					80	
Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr	Arg	Lys	Leu	Pro	Tyr	
				85					90					95		
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg					
			100					105								

<210> 20
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<220>
 <223> Synthetic Construct

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1				5					10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Tyr	Trp	Met	Asn	Trp	Val	Arg	
			20					25					30			
Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ser	Glu	Ile	Asn	Pro	Asp	
		35					40					45				
Ser	Ser	Thr	Ile	Asn	Tyr	Thr	Pro	Ser	Leu	Lys	Asp	Arg	Phe	Thr	Ile	
	50					55					60					
Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Leu	Tyr	Leu	Gln	Met	Asn	Ser	Leu	
65					70					75					80	
Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gln	Met	Gly	Tyr	
				85					90					95		
Trp	Gly	Gln	Gly	Thr	Thr	Leu	Thr	Val	Ser	Ser						
			100					105								

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Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Tyr	Trp	Met	Asn	Trp	Ile	Arg	
			20					25					30			
Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Glu	Ile	Asn	Pro	Asp	
		35					40					45				
Ser	Ser	Thr	Ile	Asn	Tyr	Thr	Pro	Ser	Leu	Lys	Asp	Arg	Val	Thr	Ile	
	50					55					60					
Ser	Lys	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val	

65					70					75					80
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gln	Met	Gly	Tyr
				85					90					95	
Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser					
			100					105							